



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,949	11/24/2003	Donna K. Hodges	BS030347 (03-BS024)	5272
7590 Scott P. Zimmerman P.O. Box 3822 Cary, NC 27519		02/28/2007	EXAMINER SIKRI, ANISH	
			ART UNIT 2109	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/28/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/720,949

Applicant(s)

HODGES ET AL.

Examiner

Anish Sikri

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/08/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Specification

The application numbers in the specification in paragraphs [0002] – [0009] (i.e., XX/XXX,XXX) are objected as the specification does not mention any numbers. The application numbers need to be provided.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which claims are directed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim **4** and **14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "mathematically describing" in **claim 4** is a relative term, which renders the claim indefinite. The term "mathematics" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The term "mathematically describing" in **claim 14** is a relative term, which renders the claim indefinite. The term "mathematics" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 9, 11, 12, 13, 19, 20 are rejected under 35 U.S.C. 102 (e) as being anticipated by Balachandran et al (US Patent 6,567,375 B2).

Consider **Claim 1**, Balachandran et al, clearly discloses the method, comprising the steps of: receiving a first data stream at a computer (Col 3 Lines 15-17), the first data stream comprising packets of data packetized according to a packet protocol (Col 3 Lines 12-33, it is inherent since that some kind of packet protocol is required), recursively segmenting the first data stream into segments (Col 7, claim 1); dispersing

at least one of the segments via a network for a subsequent processing service (Col 2 Lines 48-50, Col 4 Lines 8-13), it is where one segment of data is being processed at a coding scheme level for transmission; receiving a result of the processing service, Balachandran clearly shows the data being processed between the transceiver and the unit (Col 4, Lines 8-13); aggregating the result of the processing service into a second data streaming, Balachandran shows how the results are obtained from data processing of packets which are used in successful transmission (Col 3, Lines 55-59, 60-67, Col 4 Lines 1-8); and communicating the second data stream via the network, Balachandran et al clearly shows the transmission of second data segment (Col 7, claim 1). Recursive segmenting uses a characteristic of one segment to determine the segmentation of another segment, and this is clearly disclosed by Balachandran et al (Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Consider **Claim 2**, and as applied to **claim 1** above, Balachandran et al clearly discloses a method where the step of recursively segmenting the first data stream comprises using a characteristic of one segment to describe another segment (Col 3 Lines 15-34). Recursive segmenting uses a characteristic of one segment to determine the segmentation of another segment, and this is clearly disclosed by Balachandran et al (Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Consider **Claim 3**, and as applied to **claim 1** above, Balachandran et al clearly discloses a method where the step of recursively segmenting the first data stream

comprises using a characteristic of a preceding segment to describe a current segment (Col 3 Lines 15-34). Recursive segmenting uses a characteristic of one segment to determine the preceding segmentation of another segment, and this is clearly disclosed by Balachandran et al (Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Consider **Claim 9**, Balachandran et al clearly discloses the method of providing communications services, comprising the steps of: receiving data at a computer (Col 3 Lines 15-17), the data received as packets of data packetized according to a packet protocol (Col 7, Claim 1-3, Col 2 Lines 45-65, it is inherent since that some kind of packet protocol is required); recursively segmenting the packets of data into segments according to a segmentation profile stored in memory (Col 7, Claim 1-3, Col 2 Lines 45-65); dispersing at least one of the segments via a network for a subsequent processing service (Col 2 Lines 48-50, Col 4 Lines 8-13), it is where one segment of data is being processed at a coding scheme level for transmission; receiving results of the subsequent processing service Balachandran clearly shows the data being processed between the transceiver and the unit (Col 4, Lines 8-13); and assembling a data stream Balachandran shows how the results are obtained from data processing of packets which are used in successful transmission (Col 3, Lines 55-59, 60-67, Col 4 Lines 1-8), the data stream comprising at least one of i) the results of the subsequent processing service and ii) a recursively segmented segment (Col 7, Claim 1-3, Col 2 Lines 45-65). Recursive segmenting uses a characteristic of one segment to determine the segmentation of another segment, and this is clearly disclosed by Balachandran et al

(Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Consider **Claim 11**, and as applied to **claim 9** above, Balachandran et al as clearly discloses the method involving the step of receiving a request for the assembled data stream (Fig 1, Fig 2, Col 2 Lines 45-65). Balachandran et al clearly shows that the data packet being coded at different coding scheme level in order to improve transmission.

Consider **Claim 12**, and as applied to **claim 9** above, Balachandran et al clearly discloses the method involving the step of recursively segmenting the first data stream comprises using a characteristic of one segment to describe another segment (Col 3 Lines 15-34). Recursive segmenting uses a characteristic of one segment to determine the segmentation of another segment, and this is clearly disclosed by Balachandran et al (Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Consider **Claim 13**, and as applied to **claim 9** above, Balachandran et al discloses the step of recursively segmenting the first data stream comprises using a characteristic of a preceding segment to describe a current segment (Col 3 Lines 15-34). Recursive segmenting uses a characteristic of one segment to determine the preceding segmentation of another segment, and this is clearly disclosed by Balachandran et al (Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Consider **Claim 19**, Balachandran et al clearly discloses a system comprising: an Analysis Module stored in a memory device, the Analysis Module receiving data at a computer with the data received as packets of data packetized according to a packet protocol (Col 7, Claim 1-3, Col 2 Lines 45-65, it is inherent since that some kind of packet protocol is required), the Analysis Module recursively segmenting the packets of data into segments according to a segmentation profile stored in memory (Col 7, Claim 1-3, Col 2 Lines 45-65), the Analysis Module dispersing at least one of the segments via a network for a subsequent processing service (Col 2 Lines 48-50, Col 4 Lines 8-13), it is where one segment of data is being processed at a coding scheme level for transmission, the Analysis Module receiving results of the subsequent processing service and assembling a data stream Balachandran et al clearly shows the data being processed between the transceiver and the unit (Col 4, Lines 8-13), the data stream comprising at least one of i) the results of the subsequent processing service and ii) a recursively segmented segment; and a processor communicating with the memory device. (Col 7, Claim 1-3, Col 2 Lines 45-65). Recursive segmenting uses a characteristic of one segment to determine the segmentation of another segment, and this is clearly disclosed by Balachandran et al (Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Consider **Claim 20**, Balachandran et al as modified by Kato clearly discloses a computer program product, comprising: a computer-readable medium; and a Analysis Module stored on the computer-readable medium, the Analysis Module receiving data at a computer with the data received as packets of data packetized according to a

Art Unit: 2109

packet protocol (Col 7, Claim 1-3, Col 2 Lines 45-65, it is inherent since that some kind of packet protocol is required), the Analysis Module recursively segmenting the packets of data into segments according to a segmentation profile stored in memory (Col 7, Claim 1-3, Col 2 Lines 45-65) the Analysis Module dispersing at least one of the segments via a network for a subsequent processing service Balachandran et al clearly shows the data being processed between the transceiver and the unit (Col 4, Lines 8-13), the Analysis Module receiving results of the subsequent processing service and assembling a data stream, the data stream comprising at least one of i) the results of the subsequent processing service and ii) a recursively segmented segment (Col 7, Claim 1-3, Col 2 Lines 45-65). Recursive segmenting uses a characteristic of one segment to determine the segmentation of another segment, and this is clearly disclosed by Balachandran et al (Col 3 Lines 15-34), where the device buffer receives all the messages (segments) without uncorrectable errors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4, 5, 6, 7, 8, 10, 14, 15, 16, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balachandran et al (US Pat. 6,567,375) in view of Kato (US Pub 2002/0112060 A1).

Consider **Claim 4**, and as applied to **claim 1** above, Balachandran et al as modified by Kato, fails to disclose a method where the step of recursively segmenting the first data stream comprises mathematically describing a segment based upon a preceding segment. Nonetheless, Kato also discloses the step of recursively segmenting the first data stream comprises mathematically describing a segment based upon a preceding segment (Kato, Page 14 [0219]). Kato invention measures the throughput or the number of errors of the data transfer and stores the results from measurements in the storage section of the device (Kato, Page 14 [0219]). It is common for a person of ordinary skill in the art to see that any different segments coming to the device buffer would mean either the segment is different for a different message or it is a corrupt segment (Col 3 Lines 15-34). Therefore, it would be obvious

to a person of ordinary skill in the art at the time the invention was made to implement the method of Balachandran et al and Kato in a device, as known in the art, for the purpose of analyzing preceding data stream segments with each other.

Consider **Claim 5**, and as applied to **claim 1** above, Balachandran et al as modified by Kato fails to teach the method of comprising accruing historical routing information for a segment, the historical routing information describing at least one destination of the segment as the segment travels via the network. Nonetheless, Kato teaches the method of historical routing information for a segment, the historical routing information describing at least one destination of the segment as the segment travels via the network (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]). Kato clearly shows that the device acquires series of routing paths from between one of the destination segments and of the segments, which travel via the network. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of acquiring historical routing information of data segments, as it travels across the network.

Consider **Claim 6**, and as applied to **claim 5** above, Balachandran et al modified by Kato fails to disclose the method of assembling the second data stream using the historical routing information for the segment. Nonetheless, Kato teaches the method of assembling the second data stream using the historical routing information for the segment (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]). Kato clearly shows that

Art Unit: 2109

the device acquires series of routing paths from between one of the destination segments and of the segments, which travel via the network, and it feeds the collected data into another stream. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of assembling the second data stream using historical routing information of data segments, as it travels across the network.

Consider **Claim 7**, and as applied to **claim 1** above, Balachandran et al as modified by Kato fails to teach the method of comprising accruing historical processing information for a segment, the historical processing information describing at least one process performed on the segment. Nonetheless, Kato teaches the method of historical processing information for a segment, the historical processing information describing at least one process performed on the segment (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]). Kato clearly shows that the device acquires series of routing paths from between one of the destination segments and of the segments, which travel via the network, and the data is collected in a information collecting signal and it is here the data is processed and sent to the segment. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of acquiring historical processing information of data segments, as it travels across the network.

Consider **Claim 8**, and as applied to **claim 7** above, Balachandran et al as modified by Kato fails to disclose the method of assembling the second data stream using the historical processing information for the segment. Nonetheless, Kato teaches the method of assembling the second data stream using the historical routing information for the segment (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]. Kato clearly shows that the device acquires series of routing paths from between one of the destination segments and of the segments, which travel via the network, and it feeds the collected data into another stream. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of assembling the second data stream using historical routing information of data segments, as it travels across the network.

Consider **Claim 10** and as applied to **claim 9** above, Balachandran et al as modified by Kato clearly fails to disclose the method comprising the step of communicating the assembled data stream to a client communications device. Nonetheless, Kato clearly shows the method comprising the step of communicating the assembled data stream to a client communications device (Kato Page 13, [0213]. Kato shows that the packet judging device feeds/creates the assembled data stream with specific information before transmitting to the client communication device. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the step of Balachandran et al and Kato in communicating the assembled data stream to a client communication device.

Consider **Claim 14**, and as applied to **claim 9** above, Balachandran et al as modified by Kato clearly fails to disclose the step of recursively segmenting the first data stream comprises mathematically describing a segment based upon a preceding segment (Col 3 Lines 15-34). Nonetheless, Kato also discloses the step of recursively segmenting the first data stream comprises mathematically describing a segment based upon a preceding segment (Kato, Page 14 [0219]). Kato invention measures the throughput or the number of errors of the data transfer and stores the results from measurements in the storage section of the device (Kato, Page 14 [0219]). It is common for a person of ordinary skill in the art to see that any different segments coming to the device buffer would mean either the segment is different for a different message or it is a corrupt segment (Col 3 Lines 15-34). Therefore, it would be obvious to a person of ordinary skill in the art at the time the invention was made to implement the method of Balachandran et al and Kato in a device, as known in the art, for the purpose of analyzing preceding data stream segments with each other.

Consider **Claim 15**, and as applied to **claim 9** above, Balachandran et al as modified by Kato fails to teach the comprising accruing historical routing information for a segment, the historical routing information describing at least one destination of the segment as the segment travels via the network. Nonetheless, Kato teaches the method of historical routing information for a segment, the historical routing information describing at least one destination of the segment as the segment travels via the network (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]). Kato clearly shows that the device acquires series of routing paths from between one of the destination

segments and of the segments, which travel via the network. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of acquiring historical routing information of data segments, as it travels across the network.

Consider **Claim 16**, and as applied to **claim 9** above, Balachandran et al as modified by Kato fails to disclose the method of comprising assembling the second data stream using the historical routing information for the segment. Nonetheless, Kato teaches the method of comprising assembling the second data stream using the historical routing information for the segment (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]). Kato clearly shows that the device acquires series of routing paths from between one of the destination segments and of the segments, which travel via the network, and it feeds the collected data into another stream. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of assembling the second data stream using historical routing information of data segments, as it travels across the network.

Consider **Claim 17**, and as applied to **claim 9** above, Balachandran et al as modified by Kato fails to teach the method of comprising accruing historical processing information for a segment, the historical processing information describing at least one process performed on the segment. Nonetheless, Kato teaches the method of historical processing information for a segment, the historical processing information describing at

Art Unit: 2109

least one process performed on the segment (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]). Kato clearly shows that the device acquires series of routing paths from between one of the destination segments and of the segments, which travel via the network, and the data is collected in a information collecting signal and it is here the data is processed and sent to the segment. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of acquiring historical processing information of data segments, as it travels across the network.

Consider **Claim 18**, and as applied to **claim 17** above, Balachandran et al as fails to disclose the method of comprising second data stream using the historical processing information for the segment. Nonetheless, Kato teaches the method of comprising second data stream using the historical routing information for the segment (Kato, Page 1 [0005] – [0006], Page 2 [0020]-[0021]). Kato clearly shows that the device acquires series of routing paths from between one of the destination segments and of the segments, which travel via the network, and it feeds the collected data into another stream. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of Balachandran et al and Kato in a device, as known in the art for the purpose of assembling the second data stream using historical routing information of data segments, as it travels across the network.

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Anish Sikri whose telephone number is (571) 270-1783. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

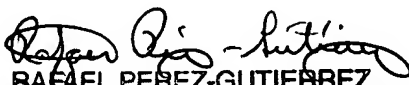
Art Unit: 2109

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Anish Sikri
A.S./as

January 30, 2007


RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER
2/15/07